Cell Metabolism
Obituary

Keith Langston Parker (1954-2008)

On December 13, 2008 the endocrine research community suffered a sad loss with the death of Keith Langston Parker, distinguished professor in biomedical research at the University of Texas (UT) Southwestern Medical Center, who succumbed as a consequence of a major heart attack suffered during his daily run 2 weeks earlier. I enjoyed Keith's friendship for 23 years, and had the privilege of collaborating with him extensively over that period. The essayist and philosopher William Hazlitt once noted that the ability to sustain a steady friendship is one of the greatest proofs of goodness of heart and of greatness of mind. This was certainly true for Keith, whose unassuming personality, sharp wit, and keen mind made for an easy friendship and productive collaboration.

Keith obtained his M.D. degree cum laude at Washington University in St. Louis, along with a Ph.D. degree in immunogenetics in the laboratory of Donald Shreffler. After completing an internal medicine residency at the UT Southwestern Medical Center, Keith joined the laboratory of Jonathan Seidman at Harvard University for postdoctoral studies in molecular biology. At the time, Seidman had isolated a number of overlapping cosmid clones from the S region of the mouse H2 histocompatibility complex. It was at this time (in 1985) when I first began collaborating with Keith. My lab had been interested in the molecular genetics of adrenal steroidogenesis, and when I had learned that one of the genes involved in adrenal steroidogenesis, *Cyp21*, resided in this S region, I had approached Seidman for the relevant cosmid clone in order to study *Cyp21* gene expression in our adrenocortical cell lines. The Seidman lab had not been able to express *Cyp21* in fibroblast cells and so was skeptical about the likelihood of our success. Nevertheless, Jonathan sent me one of his cosmid clones, and I was able to demonstrate that it contained sufficient coding information to direct the expression of *Cyp21* in an adrenal cell-selective, hormone-responsive manner. Keith and I then teamed up to identify the promoter regulatory elements involved in *Cyp21* gene expression, thereby marking the beginnings of Keith's career as an endocrinologist.

In 1987, Keith moved to the Department of Medicine at Duke University as a Howard Hughes Medical Institute investigator. It was at Duke that Keith initiated a series of experiments that propelled him to the forefront of endocrine research. Keith and I continued our collaboration and identified the promoter regulatory elements required for the expression of two other genes involved in steroidogenesis, *Cyp11a1* and *Cyp11b1*. Through these studies, we obtained the first hints of a shared promoter regulatory element required for the cell-selective expression of *Cyp21, Cyp11a1,* and *Cyp11b1*. Keith then carried out the definitive experiments by cloning the transcription factor that regulated the activity of this promoter regulatory element. He went on to demonstrate that this transcription factor, which he named steroidogenic factor 1 (SF1) was an orphan nuclear receptor of the *Ftz-F1* family of transcription factors, was expressed in the major steroidogenic tissues, and was involved in the coordinate expression of several genes involved in adrenal steroidogenesis. This discovery led to his development of SF1 knockout mice and the demonstration of extended roles for SF1 in adrenal and gonadal development and in the formation of the ventromedial hypothalamus.

In 1997, Keith returned to Dallas to become chief of the Division of Endocrinology and Metabolism, professor of internal medicine and pharmacology, and the Wilson distinguished professor in biomedical research at the UT Southwestern Medical Center. In Dallas, Keith developed tissue-specific SF1 knockout mouse models to define the roles of SF1 in specific sites in the hypothalamic-pituitary-steroidogenic gland axis, and he collaborated with many investigators around the world, generously sharing his reagents, insights, and expertise. Most of us who worked with Keith appreciated his modesty, soft-spoken demeanor, keen insight, and decisiveness. Keith was a matter-of-fact scientist who was highly efficient and got straight to the point whether he was conducting experiments, lecturing, or writing and editing manuscripts.

Keith received several honors and distinctions for his scientific work, including the Ernst Oppenheimer award from the Endocrine Society in 1996, the British Endocrine Society's Transatlantic Medal in 2004, and the University Seal from the University of Bologna in 2006. He served as an editor for the 11th edition of the leading pharmacology textbook, *Goodman and Gilman's Pharmacologic Basis of Therapeutics* and had begun work on the 12th edition before his death. He took a leadership role in the Endocrine Society, serving on the editorial boards of three of the society's journals and on the Annual Meeting Steering Committee (which he eventually chaired). Keith also played an active role in the Adrenal Cortex Conference series, serving on the program advisory committee and co-organizing the 2006 meeting in Boston, MA. Keith's greatest contributions in this setting were in the support of junior faculty and trainees. He helped identify young independent investigators with exciting research programs to speak at the conferences and

generated support for trainees to attend the meetings.

Keith was devoted to his family and was an avid fan of NCAA basketball, with a special affinity for the Duke University team. One of Keith's favorite movies was *It's a Wonderful Life*. Although Keith's wonderful life ended too soon, his work will endure, and those that he inspired will keep his memory alive for a long time. Keith is survived by his wife Linda; his children, Kevin, Andrea, Emily, Caroline, and Christopher; his parents, Drs. Charles and Mary Parker; and his four siblings, Dr. Charles Parker, Dr. Christina Parker, Dr. Kathy Ponder, and Sandy Bigg.

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